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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
Division of Forest Insect Investigations

FOREST INSECT CONDITIONS IN CALIFORNIA - 1953

The following list of active infestations has been prepared by the Berkeley Forest Insect Laboratory from reports received from its survey personnel and many private, State and federal cooperators. In most forested areas of the State, loss conditions are slightly improved. The most notable decreases in activity were displayed by the fir engraver beetle and the western pine beetle. However, Jeffrey pine beetle-caused losses continue at an accelerated rate in northeastern California and mountain pine beetle activity in sugar pine has increased generally throughout the westside of the Sierra Nevada Mountains. Losses caused by the California flatheaded borer remain high in southern California although most areas show some improvement. The outstanding single outbreak is that of the lodgepole needleminer in Yosemite National Park. Areas of above normal loss or which otherwise are worthy of note are:

I. NORTH COAST SUBREGION

1. Devils Peak. Siskiyou County.

Fairly heavy loss in ponderosa pine caused by the pine engraver and western pine beetle occurred this season near Lower Devils Peak Lookout. The infestation surrounds a 1951 burn and appears to have gained its start in fire-killed and weakened trees.

ACTION: Salvage-log if possible.

2. Lake Mountain. Siskiyou County.

Moderately heavy scattered pine loss is located in remote stands west of Lake Mountain Lookout.

ACTION: Continue surveillance.

3. Ukonom Mountain. Siskiyou County.

Scattered pine loss was encountered this fall in old-growth stands south of Ukonom Mountain Lookout.

ACTION: Salvage if possible.

4. Happy Camp - Somes Bar. Siskiyou County.

Douglas-fir killing of a moderately heavy nature is present along both banks of the Klamath River extending from Happy Camp to Somes Bar. There is no logging or other disturbance associated with the infestation except near Happy Camp.

ACTION: Salvage-log if possible.

5. Patrick Point State Park. Humboldt County.

Several hundred acres of young Sitka spruce within the Park appear off-color and have thin foliage. The damage may be due to aphis feeding.

ACTION: Additional checking is needed to determine cause and extent of the damage and to make recommendations.

6. Headwaters Van Dusen River. Trinity County.

Increased activity by pine engravers and the western pine beetle was reported during the summer in the Zenia, Ruth and Hatten Shaw Valley areas.

ACTION: Salvage if possible.

7. Philpot Creek. Trinity County.

Some activity by the western pine beetle was reported along Philpot Creek west of Peanut.

ACTION: Continue surveillance.

8. White Rock. Trinity County.

Further damage by the western pine beetle was observed in the White Rock area again this summer.

ACTION: Salvage logging.

9. Poison Rock. Mendocino County.

An infestation in mature ponderosa pine extends northeastward from Poison Rock Lookout to Black Butte River. No disturbances appear to be associated with the outbreak.

ACTION: Salvage logging.

10. Bear Wallow Ridge. Glenn County.

Heavy scattered pine loss is located along Bear Wallow Ridge. The infestation has been active for two years.

ACTION: Salvage logging.

11. Hull Mountain. Mendocino, Lake Counties.

The 1951 burn southeast of Hull Mountain is surrounded by heavy loss in ponderosa pine.

ACTION: Salvage logging.

12. Lake Pillsbury. Lake County.

An area of very restricted extent contains heavy grouped pine loss approximately three miles west of Lake Pillsbury.

ACTION: Continue surveillance.

13. Goat Mountain. Colusa County.

Fairly concentrated killing of second-growth ponderosa pine by bark beetles continued this year on the northeast slope of Goat Mountain. The pine engraver and western pine beetle activity may be associated with logging slash.

ACTION: Ground check when possible to determine status of infestation and control.

14. Boggs Mountain Recreation Area. Lake County.

The second-growth ponderosa pine stands in this highly developed resort area have suffered severely in recent years from attacks by the pine engraver and western pine beetle. Losses have diminished consistently following repeated control work and current conditions are good.

ACTION: Maintenance control by the California State Division of Forestry in cooperation with private owners.

15. San Francisco Bay Area. Marin, Contra Costa Counties, etc.

The oakworm defoliated numerous coast live oak trees in Coastal counties this summer. Large flights of adult moths have been seen recently.

ACTION: No control is needed in most areas because previous outbreaks have subsided within a few years. The Oakland Park Department is contemplating aerial spraying of watershed land.

II. NORTH SIERRA AND NORTHEASTERN CALIFORNIA SUBREGION

16. North Warner Mountains. Modoc County.

The only spruce budworm damage detected in California this year was in white fir in the Warner Mountains between Goose Lake and Fort Bidwell. Defoliation by the budworm in this area dates back many years. However, the damage has never been extensive or severe and activity this year is less than during 1952.

ACTION: No control. Continue surveillance.

17. Sugar Hill Pine Plantation. Modoc County.

A small defoliating moth was detected on young ponderosa and Jeffrey pine in these plantations last year. The larvae of this moth mine only the

needle sheaths of new terminals causing the needles to fade and shed. Continued damage over several years could seriously weaken the trees but the infestation has diminished.

ACTION: No control at present. Control will not be required unless the damage becomes more serious. Additional information concerning insect biology is needed.

18. Round Mountain. Siskiyou County.

Some 14,000,000 board feet of white and red fir on the Goosenest District was windthrown in the winter of 1951-1952. In salvage operations, which extended into 1953, serious damage by roundheaded wood borers was encountered. The larval mines resulted in heavy cull of small logs and the sapwood of large logs.

ACTION: No control. Roundheaded borers do not attack living trees. Haste in salvaging windthrown and fire-killed material will usually avoid the problem.

19. Cayton Valley and Pondosa Tract. Shasta County.

Serious killing of reserve Douglas-fir by the flatheaded fir borer continued this year in stands which were opened up when pine timber was removed in logging nearly 10 years ago.

ACTION: Salvage logging by the Shasta Forests Company has been conducted and should be continued. Removal of certain classes of trees was done in one area last year and may serve as a cure for similar areas if it results in lower losses.

20. Shingletown Pine Plantation. Shasta County.

Severe damage to terminals of young ponderosa pine occurred last year in this plantation. A large overwintering larval population of the resin midge was observed in the dead terminals early this summer. Plans were laid to initiate control by applying insecticide when the larvae migrated but continued study proved that most of the larvae died before migration could occur.

ACTION: Natural control has completely wiped out the infestation.

21. Latour State Forest. Shasta County.

There are no serious infestations on the forest this year. Some young sugar pine in the understory display flagging caused by Matsucoccus scales.

ACTION: No control. The Forest should be kept under continuous surveillance and control measures applied if conditions develop that require action.

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22. Walker Forest. Shasta County.

Douglas-fir beetle activity, prominent recently, has subsided following salvage-logging of infested trees.

ACTION: No control needed.

23. Manzanita Chute Pine Plantation. Shasta County.

Twig beetles, unusually active in several areas this year, caused moderately heavy killing of the terminals on young plantation trees this year. This type of damage had not been observed here before. Previously, infestations of twig beetles have been attributed to a weakened condition of the host although that was not evident in the plantation.

ACTION: No control. Previous infestations have always subsided rapidly without causing lasting damage.

24. Hat Creek and Mineral Districts. Shasta County.

The sugar pine cone beetle caused heavy loss of sugar pine seed as evidenced by numerous aborted cones this fall.

ACTION: No control. The need for control of this and other cone and seed insects is greatest in areas under intensive management. Recent experimental work conducted elsewhere may provide an effective control for the future.

25. Badger Mountain. Shasta County.

A very severe outbreak of the Jeffrey pine beetle occurs on the north boundary of Lassen Park along Hat Creek. The slowness of trees in fading this year prevented detection until mid-summer. Many newly attacked trees indicate that the infestation is very active.

ACTION: Control is in progress. Due to differing management objectives on National Forest and National Park land, salvage logging control will be initiated on the former while control involving application of insecticide or similar treatment will be undertaken on the latter.

26. Butte Creek. Lassen County.

The Jeffrey pine beetle, on a rampage lately around the north boundary of Lassen Volcanic National Park, caused sharply increased killing during the past year along upper Butte Creek. Jeffrey pine of all ages in virgin stands were attacked, with a grouping tendency clearly evidenced.

ACTION: Direct control is in progress. The delay in emergence of 1952 brood from infested trees enabled salvage-logging control to begin in August shortly after the full seriousness of the situation became

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evident. The work of detecting and treating all 1953-attacked trees will continue this fall. Final cleanup will be undertaken prior to emergence of overwintering brood next summer. Infested material left behind in logging will be treated by insecticide or by an equally effective method.

27. Lassen Volcanic National Park. Shasta County.

Western pine beetle losses are negligible and are confined to the Butte Lake unit. Mountain pine beetle activity in ponderosa pine is endemic but damage to lodgepole pine along streams and lakes is somewhat heavier than normal. Jeffrey pine loss caused by the Jeffrey pine beetle is serious, especially in areas where maintenance control has not been performed. An outbreak in oldgrowth Jeffrey pine near Badger Mountain is causing losses well above any previously recorded within the Park.

ACTION: Apply maintenance control to all established control units to extend the benefits derived from recent work. Undertake direct control against Badger Mountain epidemic. Keep watch on mountain pine beetle killing in lodgepole pine.

28. Cal-Cone-Harvey Mountains. Lassen County.

The Cal Mountain portion of the expanse of virgin timber running from Poison Lake to Harvey Mountain was treated last winter by salvage logging of material infested with brood of the western pine beetle. On the basis of a post-control survey, losses were completely checked, giving protection until sanitation-salvage logging can be effected there in a few years. Sanitation-salvage logging was begun on Cone and Harvey Mountains this summer to stop heavy barkbeetle killing which has occurred there in recent years.

ACTION: No control needed at Cal Mountain. Sanitation-salvage logging to continue at Cone and Harvey Mountains.

29. Thompson Peak. Plumas County.

There is insufficient information at present to evaluate the status of Jeffrey pine beetle damage following attempted control of the 1952 outbreak. Failure to remove a sufficiently large proportion of the overwintering brood trees prior to emergence of the beetles this summer is expected to result in continued losses this year.

ACTION: A reconnaissance of the area is planned for this fall following which detailed recommendations can be made. On the basis of trouble encountered last year it seems imperative that logging be conducted as soon as possible in order to prevent infested bark from being shed during skidding and loading. Long-term protection will be available in a few years when the timber is harvested.

30. Sawmill Peak Butte County

Pine engravers caused considerable top-killing of ponderosa pine last fall on Sawmill Peak and in the vicinity of the towns of Magalia and Paradise. The top-killed trees were prominent this spring and summer, but the infestation tapered off this fall. Only a few trees were filled in by the western pine beetle.

ACTION: No control. The infestation in the Sawmill Peak area has subsided, but clearing of timber for homesites in settled areas may be expected to create future infestations. An educational program against slash accumulation is advocated.

31. La Porte. Plumas County.

The biology and control of the fir sawfly, which was very active in white fir last year, was investigated by the research staff of the Berkeley Laboratory this summer. Aerial spraying experiments conducted in cooperation with the U. S. Forest Service, showed that the sawfly could be readily controlled with DDT. However, the outbreak was abruptly terminated in late July by natural biological control factors. A native virus disease that caused the death of the larvae was the principal control factor.

ACTION: No control needed.

32. Crystal Bay. Lake Tahoe, Nevada.

Epidemic loss of second-growth ponderosa pine persists for the fifth year in this locality. The mountain pine beetle is responsible for the killing which has depleted over 85 percent of the stand in localized areas. Although approximately 400 1952-killed trees were tallied this summer, there is no data concerning the number of currently infested trees. However, there is indication that the infestation will continue at a rather high rate.

ACTION: Refer the matter to Nevada State Forester with recommendation that direct control be undertaken by private owner involved.

33. Rubicon River. Placer County.

A rather severe outbreak of the fir sawfly in white and red fir exists in the upper reaches of the Rubicon River. Considerable damage has been done to Christmas tree stock.

ACTION: No control, but the area should be kept under surveillance to determine the trend of the infestation and the need for action.

34. Forest Creek. Calaveras, Amador and Eldorado Counties.

Top-killing of mature ponderosa and sugar pine by pine twig beetles is prevalent throughout the area from Forest Creek to the Rubicon River. The damage is unusually extensive and severe for this insect.

ACTION: No control. No remedies are available for this type of damage but infestations are usually short-lived.

35. Placerville. Eldorado County.

Fading of numerous small groups of ponderosa pine trees attacked by pine engravers occurred within a ten-mile radius of Placerville late this summer. The lower portion of most trees was filled in by the western pine beetle. Control has been conducted each winter within a two-mile zone of the Institute of Forest Genetics to protect the various conifers used in genetics experiments.

ACTION: Burn or spray infested trees this winter within established control zone surrounding Institute arboretum.

36. Auburn-Nevada City. Nevada and Placer Counties.

Defoliation by the fall webworm was noticeable in early fall. Trees affected were madrone, alder and certain exotics.

ACTION: No control. Damage by this insect occurs following cessation of seasonal tree growth and normally it does not result in tree mortality.

III. SOUTH SIERRA SUBREGION

37. Pinecrest. Tuolumne County.

The unit-area-control-logging test area near Pinecrest was the site of experimental spraying last June for control of the sugar pine cone beetle. This seed-destroying insect causes periodic destruction of whole cone crops. The preservation of natural seed supply in this and other test areas is highly desirable in view of high planting costs which must be incurred when natural regeneration fails due to destruction of seed by cone beetles.

ACTION: No additional action until results of experimental aerial spraying of DDT solution are evaluated this fall.

38. Yosemite National Park. Tuolumne, Mariposa Counties.

Several outbreaks of forest insects exist this year in the Park. The most serious infestation is that of the lodgepole needleminer which defoliated 46,000 acres of lodgepole pine in the area around Tenaya Lake and Tuolumne Meadows. Action was necessary late this summer to try to save the infested trees in areas of especially high value for recreation. Control on 11,000 acres of lodgepole pine was undertaken on a trial basis. The method employed was to apply a DDT solution by airplane.

ACTION: Subsequent attempts to control this outbreak depend upon continuance of the defoliation and the results of spraying this year.

Another severe infestation is located in Conness Basin where the mountain pine beetle has attacked lodgepole pine, previously infested by the lodgepole needleminer. Approximately 500 acres are affected.

ACTION: Direct control, using insecticidal spray.

White fir in the vicinity of Crane Flat was partially defoliated by a sawfly but the damage is not serious.

ACTION: No control.

Losses in oldgrowth sugar pine, caused by the mountain pine beetle, have increased slightly. Western pine beetle activity is light.

ACTION: Maintenance control in established control units which are of high priority.

39. Mammoth Lakes Area. Mono County.

The California flatheaded borer is killing numerous Jeffrey pine along Highway #399 between Leevining and Mammoth Lakes.

ACTION: Immediate salvage of infested trees and application of sanitation-salvage logging in virgin stands.

40. Reds Meadow. Devil Postpile National Monument. Madera County.

Current losses of lodgepole pine trees in campgrounds are not serious. The area has been the site of maintenance control through use of insecticide during the past two years.

ACTION: Maintenance control in and around campgrounds to restrict barkbeetle numbers to their present level.

41. Miami Creek. Mariposa, Madera Counties.

The mountain pine beetle caused severe losses in young sugar pine here two years ago. Falling and spraying infested trees with insecticide has been very effective in reducing losses but a crowded stand condition indicates that the basis for future infestations remains.

ACTION: No control. Research following the recent outbreak suggests that silvicultural treatment would provide lasting protection for future sugar pine crop trees.

42. Hume Lake. Fresno County.

Moderate activity by the mountain pine beetle and pine engravers is present in young sugar pine on the Hume Lake Ranger District.

ACTION: No control.

43. Sequoia-Kings Canyon National Parks. Fresno, Tulare Counties.

Infestations of several bark beetle species in oldgrowth pine within the Parks are on a downward trend with the exception of the mountain pine beetle in sugar pine. Perhaps the greatest insect damage is caused by the lodgepole needleminer in the back country areas of Woods Creek, Big Arroyo, Forest Creek, Hackett Meadows, and Gallats.

ACTION: Maintenance control of overwintering bark beetle broods. No control of needleminer pending results of recent spraying in Yosemite National Park.

IV. SOUTHERN CALIFORNIA SUBREGION

Project Area	County	Acreage	Insect Species 1/	Host	Status 2/	Recommended Action
LOS PADRES						
Figueroa Mtn.	Santa Barbara	1,500	Db	PP-CP	-	Maintenance control
Mt. Pinos	do	2,500	"	PP	-	Sanitation-salvage
Grade Valley	do	1,000?	FH	JP	0	do
Alamo Mtn.	do	1,500	Db-Ips	"	-	Salvage, if possible
ANGELES						
Charlton-Chilao-Barley Flats	Los Angeles	2,300	Db-Ips	PP-CP	-	Maintenance control
Crystal Lake	do	1,000	"	PP	+	do
Big Pine-Wrightwood	do		FH-Dv	JP	-	Sanitation-salvage
SAN BERNARDINO						
Crestline-Arrowhead	San Bernardino	18,000	Db-Ips	PP-CP	-	Maintenance & salvage
San Jacinto-Idyllwild	Riverside	14,500	"	"	-	do
Barton Flats	San Bernardino	7,500	Db-Dj	PP-JP	-	Sanitation salvage & direct control
Cienaga-Seca	do	2,000	Dj	JP	+	Salvage
CLEVELAND						
Corte Madera	San Diego	1,600	Db	PP-CP	-	Maintenance
Laguna Mtn.	do	10,000	Db-Ips	"	0	do
Palomar Mt.	do	2,000	"	"	+	Direct control
Boulder Creek	do	600	Db or FH	PP or JP	+	Salvage
Julian	do	3,000	Db-Ips	PP	+	Salvage & direct control
Cuyamaca	do	4,000	FH	JP	-	do
Dyche Valley	do	700	?	?	+	Salvage

1/ Db = Western pine beetle
Dj = Jeffrey pine beetle
FH = Flatheaded wood borer
Dv = Red turpentine beetle
Ips = Pine engraver beetle

2/ + = Infestation increasing
0 = Infestation static
- = Infestation diminishing